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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/873,373	06/05/2001	Wilhelm Reiter	033275-225	5771

21839 7590 03/21/2003

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EXAMINER

KIM, TAE JUN

ART UNIT	PAPER NUMBER
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3746

DATE MAILED: 03/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)	
09/873,373	REITER ET AL.	
Examiner	Art Unit	
Ted Kim	3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-7, 9-13, 15-17 and 21-29 is/are pending in the application.
- 4a) Of the above claim(s) 4, 6, 7, 11-13, 17, 21, 25 and 27-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2, 3, 5, 9, 10, 15, 16, 22-24, 26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Claims 4, 6, 7, 11-13, 17, 21, 25, 27-29 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 14
2. Applicant's election with traverse of species I in Paper No. 14 is acknowledged. The traversal is on the ground(s) that "search examination of the entire application can be made without serious burden on the [USPTO]". This is not found persuasive because applicant cannot the judge of what constitutes a serious burden to the Examiner, but rather the Examiner must determine what constitutes a serious burden. In this case, due to the number of claims now particularly drawn to individual species [as opposed to being in generic form] and due to the substantial number of alternatives "and/or" phrases expressed in the claims as well as total number of multiple dependent claims, the total number of permutations of the limitations of the claims present a large number of claims variations. As the species are also separate and distinct, the excessive permutations of the claim alternatives present a serious burden in the judgment of the examiner.

The requirement is still deemed proper and is therefore made FINAL.

Claim Objections

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3. Claim 9 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2, 3, 5, 9, 10, 15, 16, 22-24, 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al (6,253,554) in view of Bunker (5,611,197) and Koch et al (5,581,996). Kobayashi et al teach a gas turbine system (note that there are many applicable embodiments, see Figs. 6 and 8 for the broadest applied embodiments) comprising a compressor 8 that compresses air to compressor end air that is available on the outlet side, a combustor, a turbine, first cooling lines 28 (see Fig. 6) in which process compressed air is removed from the compressor, is fed as cooling air for cooling inside an internal cooling channel 31a, 31b through thermally loaded components of the combustor and/or turbine, second cooling lines 32 from which cooling air from the components back to the compressor 8, wherein, in the manner of targeted leakage, a small part of the cooling air is fed for film cooling into the turbine stream through drilled

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film cooling openings provided on the components. The cooling air is returned via 32 to the compressor at an intermediate location and compressed and added to compressor end air 28, in analogous fashion to that disclosed by applicant in Figure 1. The air extracted in the first line 28 is cooled by cooler 16 prior to cooling turbine components. Kobayashi et al specifically teach the cooling system recovers only a part of the cooling air (col. 15, lines 48-col. 16, line 14), i.e. some of the cooling air is injected into the high pressure sections (compare with Fig. 7 for example). As is well known in the gas turbine cooling art, this is inherently film cooled. However, to avoid any ambiguity, Lee teach that the gas turbine blades are film cooled 40 at both upstream 22 and downstream 24 edges, the blades are either rotor blades or stationary (stator) blades (col. 2, lines 17-24). It would have been obvious to one of ordinary skill in the art to film cool the turbine components, as taught by Lee, as being the standard practice in the art and in keeping with Kobayashi's requirement for allowing leakage into the gas turbine stream, in order to maintain the cooling effectiveness. Kobayashi et al do not teach a cooler in the second cooling line. Bunker teaches taking compressor air in a first line 44B, cooling gas turbine component parts 20B and returning the cooling air in a second line 46B where a cooler 50 serves to cool the cooling air in the second line (see col. 5, lines 29+) and can be used to match the temperature of the return air in the second line to that in the compressor. It would have been obvious to one of ordinary skill in the art to employ a cooler in the return line, in order to cool the return line and match the temperature of the cooling air to that within the compressor.

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Response to Arguments

6. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Ted Kim whose telephone number is 703-308-2631. The Examiner can be reached on regular business hours before 5:00 pm, Monday to Thursday and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Thorpe, can be reached on 703-308-0102.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist of Technology Center 3700, whose telephone number is 703-308-0861.

General inquiries can also be directed to Technology Center Customer Service Office at 703-306-5648 or the Patents Assistance Center whose telephone number is 800-786-9199. Furthermore, a variety of online resources are available at

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